

DESIGN DATA

NORTRONICS

AUDIO HEADS

X-R1LC & X-R1NC

Extended Tip R/P

.020" & .013" SINGLE CHANNEL



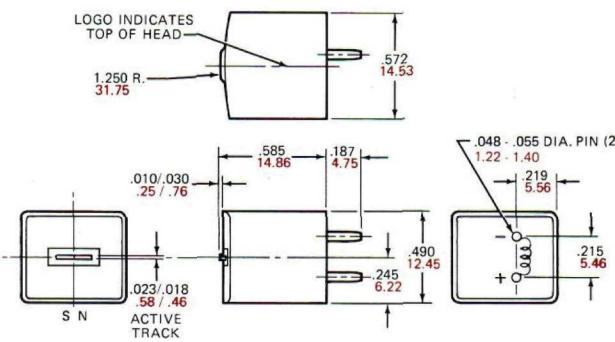
ELECTRICAL	MODEL NUMBERS	
	X-R1LC 7K	X-R1NC 10K
Head Function (Typical)	Playback	Playback
Track Width, inches	.021	.0135
Inductance - 1 kHz, millihenrys	400	500
Impedance - 1 kHz, ohms	2,500	3,500
Resistance, D.C., ohms	430	690
Gap Length, microinches	100	100
Average 3.75 IPS playback characteristics		
1 kHz Output, millivolts	0.8	0.7
10 kHz/1 kHz Ratio, dB	-6	-14

PHYSICAL CONFIGURATIONS

NOTE:
INCHES IN BLACK
MILLIMETERS IN COLOR

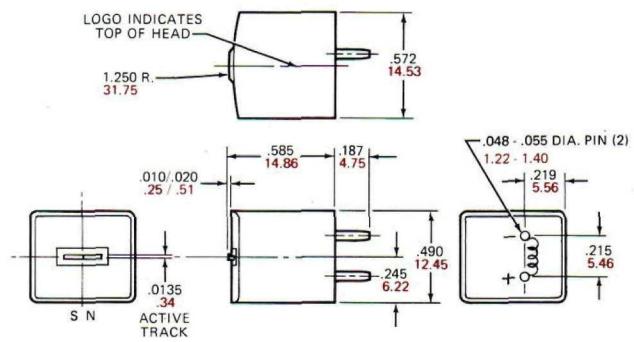
BASIC HEAD CONFIGURATION – NO MOUNT

X-R1LC



BASIC HEAD CONFIGURATION – NO MOUNT

X-R1NC



DESIGN DATA

NORTRONICS

AUDIO HEADS

XZ-R1LC & XZR1NC

Extended Tip

Z COMBO®

Erase & R/P

.020" & .013" SINGLE CHANNEL



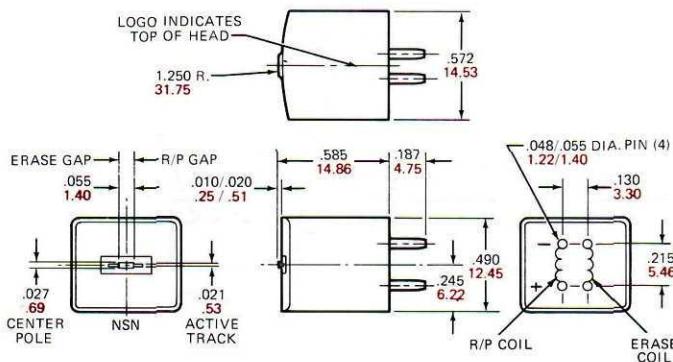
ELECTRICAL (R/P SECTION)	MODEL NUMBERS		
	XZR1LC 47K	XZR1LC 96K	XZR1NC 75K
Track Width (Nominal), inches	.021	.021	.013
Head Function (Typical)	Record/ Playback	Record/ Playback	Record/ Playback
Inductance - 1 kHz, millihenrys	450	200	550
Resistance, D.C., ohms	1,000	465	1,500
Impedance, 1 kHz, ohms	3,600	1,600	4,000
Gap Length, microinches	100	100	100
ELECTRICAL (ERASE SECTION)			
Inductance, 1 kHz, millihenrys	13	8	0.6
Resistance, D.C., ohms	80	80	7.5
Average 3.75 IPS constant current record/playback characteristics using 3M 150 tape biased @ 1 kHz and recorded 12 dB below tape saturation, with R/P shunt capacitor. See Z Combo application notes.			
Erase Bias Current, 60 kHz, ma	13	20	33
Erase Bias Voltage, RMS, 60 kHz, volts	35	40	5
Record Current, microamps	22	30	30
1 kHz Output, millivolts	0.8	0.5	1.1
10 kHz/1 kHz Ratio, dB	-14	-12	-12
Shunt capacitor across R/P Coil, pf	50	50	300

PHYSICAL CONFIGURATIONS

NOTE:
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MILLIMETERS IN COLOR

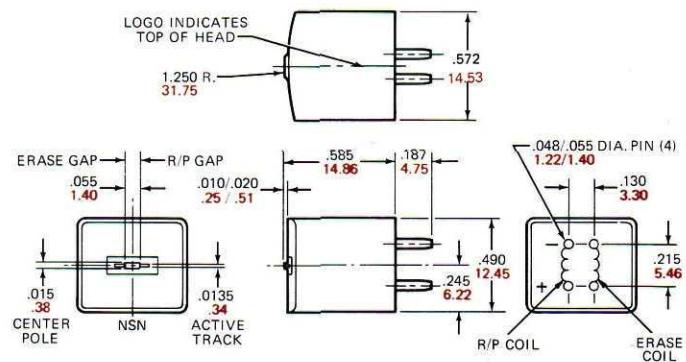
BASIC HEAD CONFIGURATION – NO MOUNT

XZ-R1LC



BASIC HEAD CONFIGURATION – NO MOUNT

XZR1NC



DESIGN DATA

NORTRONICS

AUDIO HEADS

X-W1LC
Extended Tip R/P
Miniature Series
.021" SINGLE CHANNEL

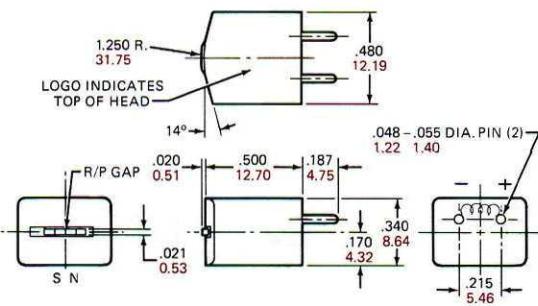


ELECTRICAL	MODEL NUMBER		
	X-W1LC 6K	X-W1LC 8R	X-W1LC 7K
Head Function (Typical)	Record/ Playback	Record/ Playback	Record/ Playback
Inductance - 1 kHz, millihenrys	200	10	450
Impedance - 1 kHz, ohms	1310	70	3000
Resistance, D.C., Mono, ohms	360	60	700
Gap Length, microinches	100	500	100
Average 3.75 IPS constant current record/playback characteristics using 3M150 tape peak biased @ 1 kHz and recorded 12 dB below tape saturation			
Peak Bias Current, 60 kHz, ma	.6	2.5	.13
Bias Voltage, RMS, 60 kHz, volts	20	5.0	26
Record Current, microamps	30	150	25
1 kHz Output, millivolts	.50	—	.8
10 kHz/1 kHz Ratio, dB	-11	—	-9

PHYSICAL CONFIGURATIONS

NOTE:
INCHES IN BLACK
MILLIMETERS IN COLOR

BASIC HEAD CONFIGURATIONS – NO MOUNT



X-ZW1LC

Extended Tip Z COMBO®

Erase & R/P

Miniature Series

.021" SINGLE CHANNEL

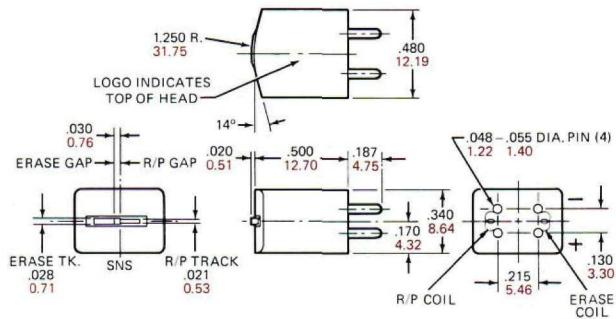


ELECTRICAL (R/P SECTION)	MODEL NUMBER	
	X-ZW1LC 96K	X-ZW1LC 47K
Head Function (Typical)	, Record/ Playback	Record/ Playback
Inductance - 1 kHz, millihenrys	200	400
Resistance, D.C., ohms	415	600
Impedance, 1 kHz, ohms	1600	3000
Gap Length, microinches	100	100
ELECTRICAL (ERASE SECTION)		
Inductance, 1 kHz, millihenrys	8	10
Resistance, D.C., ohms	65	75
Average 3.75 IPS constant current record/playback characteristics using 3M211 tape biased @ 1 kHz and recorded 12 dB below tape saturation, with R/P shunt capacitor of 200 pf. See "Z" combo application notes		
Erase Bias Current, 60 kHz, ma	20	20
Erase Bias Voltage, RMS, 60 kHz, volts	30	44
Record Current, microamps	35	25
1 kHz Output, millivolts	.5	0.7
10 kHz/1 kHz Ratio, dB	-12	-14

PHYSICAL CONFIGURATION

NOTE:
INCHES IN BLACK
MILLIMETERS IN COLOR

BASIC HEAD CONFIGURATIONS – NO MOUNT



DESIGN DATA

NORTRONICS
AUDIO HEADS

Miniature Type "L" Head R/P & Erase

0.024" OR 0.042" SINGLE CHANNEL
FLUSH OR RELIEVED FACE



R/P DATA

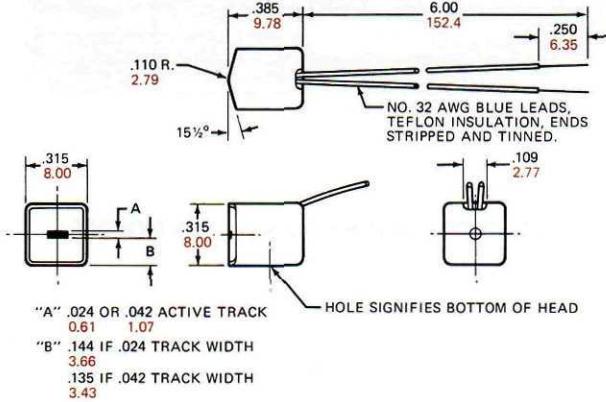
ELECTRICAL	MODEL NUMBER				
	L42R 3K 3K5	L42R 5K 5K5	L42R 8L 8L5	L24R 2K 2K5	L24R 8L 8L5
Head Function (Typical)	Record/ Playback	Record/ Playback	Record/ Playback	Record/ Playback	Record/ Playback
Inductance - 1 kHz, millihenrys	250	220	80	200	40
Impedance - 1 kHz, ohms	1600	1600	500	1200	250
Resistance, D.C., Mono, ohms	460	250	125	465	130
Gap Length, microinches	100	100	160	100	160
Track Width, inches	.042	.042	.042	.024	.024
Average 7.5 IPS constant current record/playback characteristics using 3M150 tape peak biased @ 1 kHz and recorded 12 dB below tape saturation					
Peak Bias Current, 60 kHz, ma	.23	.40	.4	.23	.45
Bias Voltage, RMS, 60 kHz, volts	24	25	9	15	5.5
Record Current, microamps	30	30	40	25	45
1 kHz Output, millivolts	1.0	1.0	1.0	1.1	.5
10 kHz/1 kHz Ratio, dB	0	0	+2	+2	+2

ERASE DATA

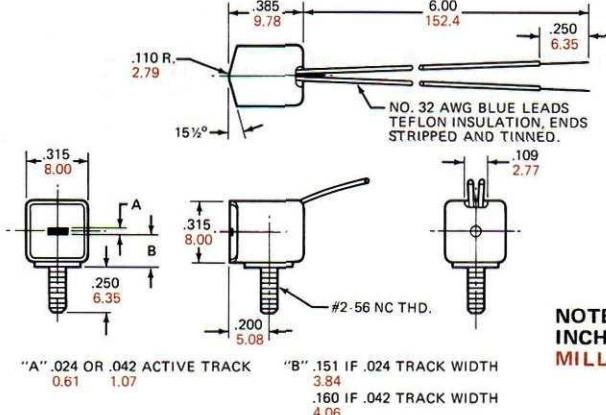
ELECTRICAL	MODEL NUMBER	
	L42E 6U 6U5	
Inductance @ 1 kHz, millihenrys	5	
Resistance, D.C., ohms	40	
Track Width, inches	.042	
Typical operating characteristics for 60 dB erasure of saturated 400 CPS		
Erase Voltage @ 60 kHz, volts	32-48	
Erase Current, ma, 60 kHz	28-42	
Impedance @ 60 kHz, ohms	1200	

PHYSICAL CONFIGURATIONS

BASIC HEAD CONFIGURATION – NO MOUNT



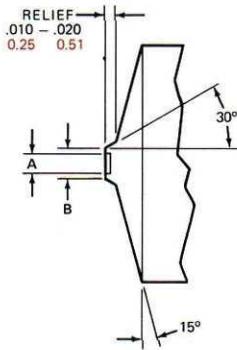
HEAD WITH BASE MOUNT CONFIGURATION



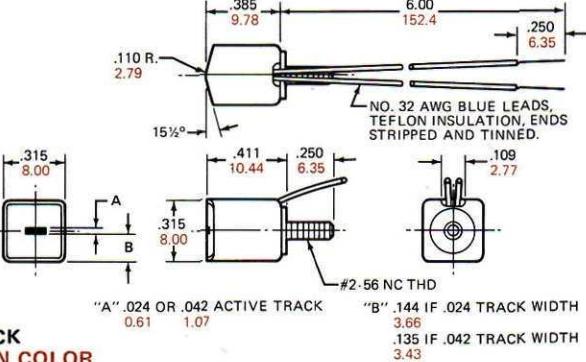
FACE-RELIEF OPTION:

TYPE "L" HEADS ALSO AVAILABLE WITH RELIEVED FACE OPTION. SEE DETAIL. SPECIFY #5 AFTER GAP DESIGNATOR; EXAMPLE:

L42R3K IS FLUSH FACE
L42R3K₅ IS RELIEVED FACE



HEAD WITH REAR MOUNT CONFIGURATION



NOTE:
INCHES IN BLACK
MILLIMETERS IN COLOR

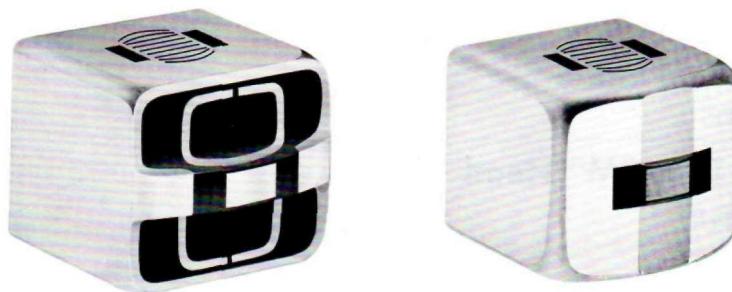
DESIGN DATA

NORTRONICS

AUDIO HEADS

B1HC & XY-C1HC Half Track Mono R/P

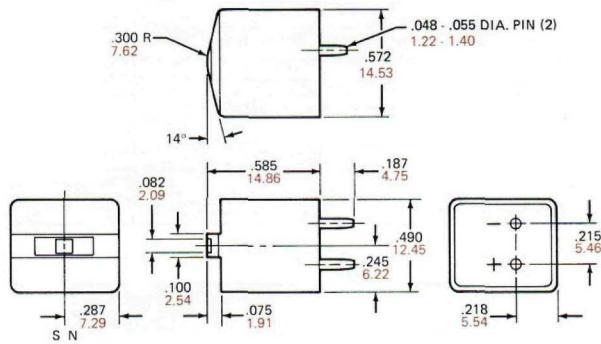
0.080" SINGLE CHANNEL
WITH RELIEVED FACE FOR
FILM/DRUM APPLICATIONS



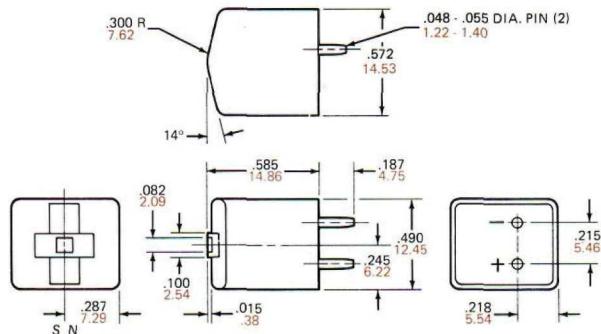
PHYSICAL CONFIGURATIONS

NOTE:
INCHES IN BLACK
MILLIMETERS IN COLOR

B1HC27L57-NO



B1HC27L67-NO

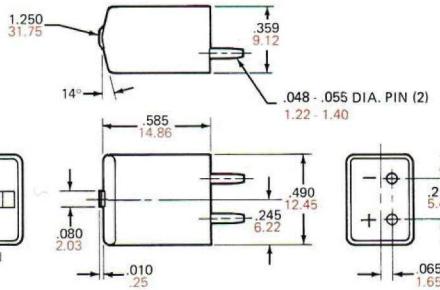


MODEL NUMBER

ELECTRICAL	XY-C1H 7K	XY-C1HC 8T	B1HC 27L
Head Function — Typical	Record/ Playback	Erase	Playback
Inductance — 1 kHz - millihenrys	400	6.0	4,000
Impedance — 1 kHz - ohms	2,650	2,000	17,000
Resistance, D.C., Mono, ohms	135	27	2,400
Gap Length, microinches	100	2,000	160
Average 7.5 IPS constant current record/playback characteristics using 3M 150 tape peak biased @ 1 kHz and recorded 12 dB below tape saturation			
Peak Bias Current, 60 kHz, ma	.6	60*	—
Bias Voltage, RMS, 60 kHz, volts	45	60*	—
Record Current, microamps	36	—	—
1 kHz Output, millivolts	2.1	—	10.0
10 kHz/1 kHz ratio, dB	-1	—	+1.0
Average 3.75 IPS constant current record/playback characteristics using 3M 150 tape peak biased @ 1 kHz and recorded 12 dB below tape saturation			
Peak Bias Current, 60 kHz, ma	.5	—	—
Bias Voltage, RMS, 60 kHz, volts	36	—	—
Record Current, microamps	35	—	—
1 kHz Output, millivolts	1.9	—	—
10 kHz/1 kHz ratio, dB	-11	—	—

*Erase data for 40 dB erasure of a 400 Hz saturated signal on 3M 150 tape

XY-C1HC



Miniature Type "M" Head R/P & Erase



PHYSICAL CONFIGURATIONS

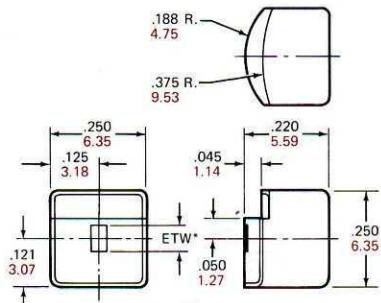
NOTE:
INCHES IN BLACK
MILLIMETERS IN COLOR

FACE-RELIEF OPTION:

MINIATURE "M" HEAD' WITH #3
FACE RELIEF.

To specify: Add 3 to Part # following Gap
Designator

Example: M70R4L3-NX-6U



.070 R/P HEAD

1.78

*ETW = .090 ERASE HEAD
2.29

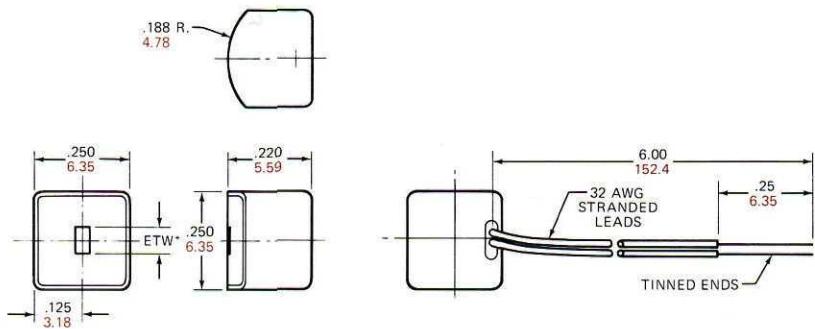
R/P DATA

ELECTRICAL	MODEL NUMBER		
	M70R3L M70R3L3	M70R4L M70R4L3	M70R5L M70R5L3
Head Function (Typical)	Record/ Playback	Record/ Playback	Record/ Playback
Inductance - 1 kHz, millihenrys	95	20	200
Impedance - 1 kHz, ohms	700	150	1500
Resistance, D.C., Mono, ohms	340	80	700
Gap Length, microinches	160	160	160
Average 7.5 IPS constant current record/playback characteristics using 3M150 tape peak biased @ 1 kHz and recorded 12 dB below tape saturation			
Peak Bias Current, 60 kHz, ma	.97	2	.6
Bias Voltage, RMS, 60 kHz, volts	16.3	9	25
Record Current, microamps	48	100	33
1 kHz Output, millivolts	1.4	.75	2.2
10 kHz/1 kHz Ratio, dB	-3	-3	-3
Average 3.75 IPS constant current record/playback characteristics using 3M150 tape peak biased @ 1 kHz and recorded 12 dB below tape saturation			
Peak Bias Current, 60 kHz, ma	.83	1.7	.5
Bias Voltage, RMS, 60 kHz, volts	14	7.6	21
Record Current, microamps	45	85	30
1 kHz Output, millivolts	1.1	.7	1.8
10 kHz/1 kHz Ratio, dB	-15	-15	-15

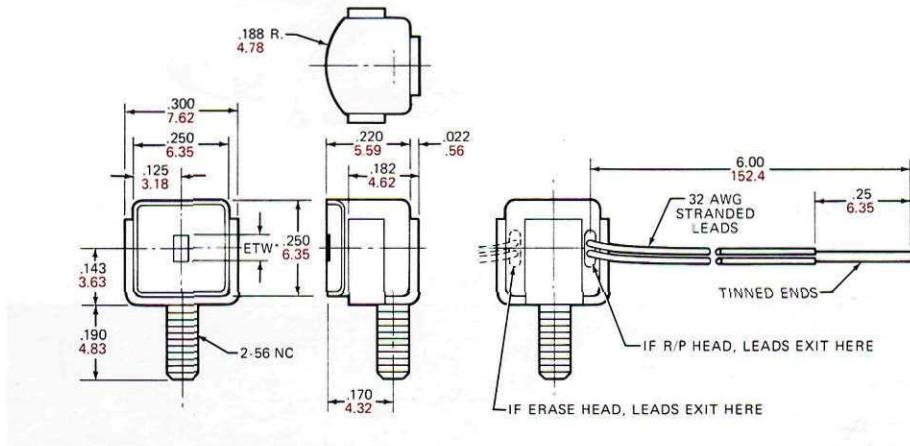
ERASE DATA

ELECTRICAL	MODEL NUMBER	
	M90E3U M90E3U3	M90E4U M90E4U3
Inductance @ 1 kHz, millihenrys	16	6
Resistance, D.C., ohms	315	83
Operating characteristics for a minimum of 45 dB erasure of saturated 400 CPS on 3M 150 tape		
Erase Voltage @ 60 kHz, volts	50	45
Erase Current, ma	12	30
Impedance, 60 kHz, ohms	4000	1500

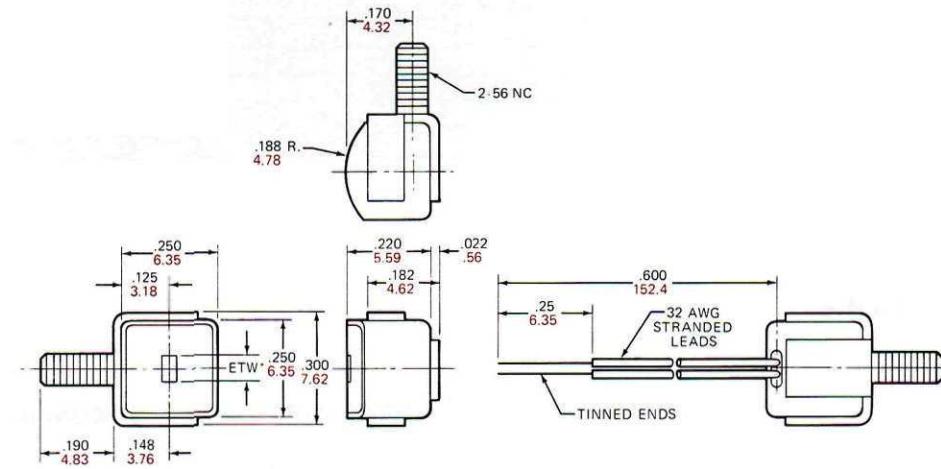
BASIC HEAD CONFIGURATIONS – NO MOUNT



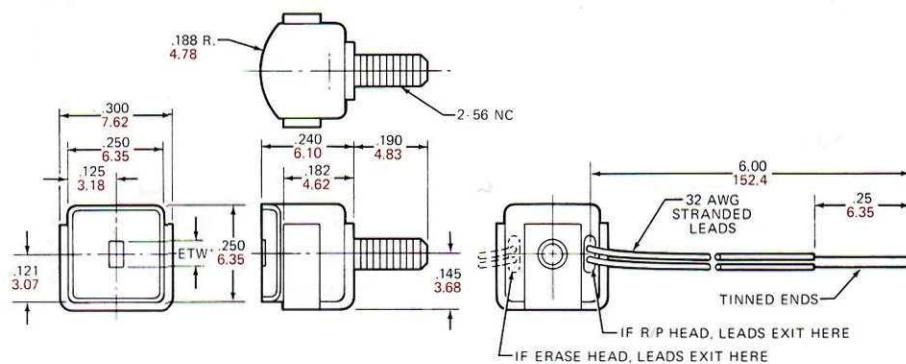
HEAD WITH BASE MOUNT CONFIGURATION



HEAD WITH SIDE MOUNT CONFIGURATION



HEAD WITH REAR MOUNT CONFIGURATION



.070 R/P HEAD

1.78

* ETW = .090 ERASE HEAD
2.29